

DETAILED ACTION

Response to Arguments

Examiner carefully reviewed arguments filed 11/10/2009; however, in view of applicants amendment to claim 1, such amendment affected the scope of its' dependent claims and thus all arguments are moot in view of the new grounds of rejection provided below.

On page 8, applicant argues that rejections under 35 U.S.C. 101 and 112 have been overcome in the amendment. Examiner acknowledges the amendment and that it overcomes the previous rejections under 35 U.S.C. 101 and 112. However, in view of applicant's amendment, new rejections under 35 U.S.C. 112 are set forth below. The objection is withdrawn in view of cancellation of claim 2. There appears to be proper support for the amendments made to the claims in view of the specification and figures, as pointed out by applicant.

On page 9, applicant states that “another advantage of the invention is that the wedge-shaped recesses are located on one side of the device, while the Fresnel lens segments are located on the opposing part of the device.” Examiner respectfully disagrees, as Stork discloses having the recesses (or sawtooth configuration) being present on only one side of the device **c2:L32-36**, such as the bottom side, while the Fresnel lens may be present on the top side **c1:L63-67 & c3:L39-43**. They appear to be present in a parallel matter as well as apparent from **figures 1 and 2** of Stork.

On page 10, applicant states that Stork fails to disclose having a fixation element. Examiner respectfully disagrees, while the edges **4** of the device may be interpreted as

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the fixation element and one skilled in the art is capable of fixing the lens of Stork into an eye.

On page 10, applicant further states that Stork fails to disclose having a Fresnel lens in addition to the wedge-shaped recesses. As discussed above, the sawtooth and additional diffractive fine structure is present, and being interpreted as meeting the limitation of a Fresnel lens in addition to the wedge-shaped recesses. Further explanation is provided below with respect to claim 1 under rejection by 35 U.S.C. 102.

On page 11, applicant states that Stork fails to have wedge-shaped recesses. Examiner respectfully disagrees and maintains position as stated above.

On page 12, applicant further states that Stork fails to disclose having one side with the Fresnel lens and the other with the wedge-shaped recesses. Examiner respectfully disagrees and maintains position and discussion supra and further elaborated in rejection below. Further, it remains the position of the Examiner that Stork anticipated claim 1, as currently written.

On pages 12 and 13, applicant argues that since Stork fails to anticipate claim 1, then Stork can not be used in an obviousness rejection. While Examiner maintains that Stork anticipates claim 1, and thus provides for eligibility in an obviousness rejection.

On page 14, applicant continues to argue with respect to the obviousness rejection. Examiner maintains the position that Stork anticipates claim 1. Any arguments with respect to the obviousness rejections are moot in view of the new grounds of the rejection necessitated by the changes to the independent claim in the amendment filed 11/10/2009.

Examiner's Comment

Examiner carefully reviewed applicant's arguments and amendments to the claims. However, the claims present several issues and rejections as identified below. While applicant's disclosure identifies subject matter novel over the prior art of record, the claims as presently written are either broad or in improper format. In order to advance this case in prosecution, examiner recommends that applicant begin with claim 1, and further identify additional structural features in order to overcome the reference by Stork, as previously cited by examiner. Examiner will agree that there are difference between applicant's inventive concept and Stork; however, this is not presented in the claims at this time. Further, the dependent claims need to be re-written to point out and distinctly claim the subject matter which applicant regards as the invention over the prior art of record. Further consideration of amendments to the claims will be needed to determine patentability.

The claims should be written to particularly point out and distinctly claim the inventive concept. Apparatus or product claims should focus on the structural features of the invention, so as to not read upon other products in the prior art of record. A focus on functional language and/or intended use is given patentable weight, but claims will read upon prior art if the structure is present and the device is capable of performing the task or function as claimed, even if the prior art does not specifically state the particular function or use. For example, a lens is capable of being located facing or opposing the retina, thus, this terminology used in a claim would provide no distinction over the prior art and remain rejected. Furthermore, the claims should be written to describe the

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structural features and should be written as to not claim the human body nor positively require the human body. Thus, to claim the device in position relative to the retina, or any other body part, it is best to use the terminology "adapted to" or "capable of" or "configured to". For example, "the lens comprises: an anterior surface, and a posterior surface, whereby said anterior surface is configured to face the retina". These are merely suggestions to aid applicant, and are not indications of allowable subject matter.

Applicant should review MPEP and ensure amended claims conform to US laws, rules, and regulations. There are numerous errors and not all of them could be listed. Thus, applicant should review each and every claim closely for additional errors.

Examiner further requests applicant to ensure that proper support exists in the specification for any amendments, and to point out where such support exists for each claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-14, and 17-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1; There is a lack of antecedent basis on line 2, "this device" should recite "said device". On line 3, it recites "convex lens element" and on line 5, it recites "convex parts", there is a lack of antecedent basis for "convex parts" or

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it is unclear whether convex parts and convex lens element are the same or different element. The claim also recites the term “features” whereby it is unclear whether the language following the term is required or not. Applicant should consider use of the term “comprising”. Similar issues appear in dependent claims and should be addressed. Please see MPEP for further rules and regulations.

With respect to claim 3; the claim language recites “wedge-shaped recesses feature different angles”, however, claim 1 recites having the inclined areas as being parallel to each other. Thus, claim 3 appears to contradict claim 1 and it is not clear what exactly is being claimed.

With respect to claim 4; there is a lack of antecedent basis for the term “rear side”. There is also a lack of antecedent basis for the term “recesses”, as claim 1 identifies “wedge-shaped recesses”.

With respect to claims 5, 11, 19, 22; the claim should state “human eye” or “eye of the patient” to avoid confusion. It is recommended by examiner that applicant use “adapted to”, “capable of”, or “configured to” with respect to functional language and/or intended use.

With respect to claim 9; it is unclear what a “supply and removal canal” is. There is a lack of antecedent basis for the term “supporting element”.

With respect to claim 13; the term “—” should be removed. Further, it is unclear what applicant is claiming, first it recites sites without wedge-shaped recesses or convex lens parts or segments of a Fresnel lens, then it claims having these in combination?

With respect to claim 17; the claim appears to repeat the limitations of claim 1 and is not needed as no further structural limitation appears to be set forth by the claim.

With respect to claim 18; it is unclear how a pump or volume modification means features a characteristic curve, unless one is discussing recording results via a computer. It is unclear what further limitation is set forth by the claim.

Claims 6-8, 10, 12, 14, 20, and 21 are dependent upon a rejected claim and rejected for the same reasons thereof.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Stork et al USPN 6,835,204 “Stork”.

Stork discloses the invention substantially as claimed. Stork discloses having a lens, whereby the top surface comprises a Fresnel lens, which is identified by Stork as an additional diffractive fine structure which *may* extend over the entire lens part **c1:L63-67**. This additional diffractive fine structure of Stork is identified specifically as a Fresnel lens **c3:L39-43**. Furthermore, on the other side, Stork provides for a sawtooth configuration **c2:L32-36**, where Stork specifically states that the sawtooth configuration

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may be present on one side. Thus, Stork provides a lens with one side having a Fresnel lens segment and the other side having a sawtooth configuration. Examiner interpreted the sawtooth configuration as meeting the limitation of a wedge-shaped recess. From review of **figures 1 and 2** of Stork, it is apparent that the recesses are in fact parallel, and further that the lens takes on a convex shape.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4-8, 11, 13, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stork et al USPN 6,835,204 "Stork" as applied to claim 1 above, and further in view of Large USPN 5,712,721.

With respect to claim 4; Stork discloses the invention substantially as claimed. However, Stork fails to disclose the use of a coating or protective layer to fill the recesses. Large discloses the use of a coating or protective layer (namely the

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protective outer coating; c2:L46-47) for the purpose of protecting the lens. The layer, although not explicitly taught, would prevent the reflection of light on the edges of the device after passage through the lens device. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Stork's device with the addition of a protective layer, as taught by Large, in order to protect the lens.

With respect to claims 5, 11; Stork discloses the invention substantially as claimed. However, Stork fails to disclose the use of a coating and/or material with a refraction index equal to the chamber fluid. Large discloses the use of a material with the same refractive index (c4:L6-8) as the transparent (24) fluid for the purpose of providing a single focus. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Stork's device with the coating having a refractive index, as a transparent fluid, equal to that of the chamber fluid, as taught by Large, in order to provide a single focus.

With respect to claim 6; Stork discloses the invention substantially as claimed. However, Stork is silent with respect to an anterior and posterior chamber separated by a transparent wall. Large discloses a lens with an anterior and posterior chamber separated by a transparent wall, where the anterior chamber not facing the retina features at least one convex elastic element (c3:L40-44) where alignment of the curve allows the focal width of this element is variable (See FIG. 2). The word "chamber" is defined as a "natural or artificial enclosed space or cavity" by Merriam-Webster's online dictionary. ***With respect to claim 7;*** Large further discloses a lens with a supporting element for the recesses so that the inclination, as in when placing an object up, such

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as (23) against the recesses (22), the inclination angle is adjusted to meet that of the recesses depending on their angle (See FIG. 4). **With respect to claim 8;** inherently, the supporting element is pre-stressed against rotation. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Stork's device with the teachings by Large, in order to provide an anterior and posterior chamber of the transparent element, with an elastic element to allow for variable focal width, further with a support for the recesses, in order to provide for better focusing powers.

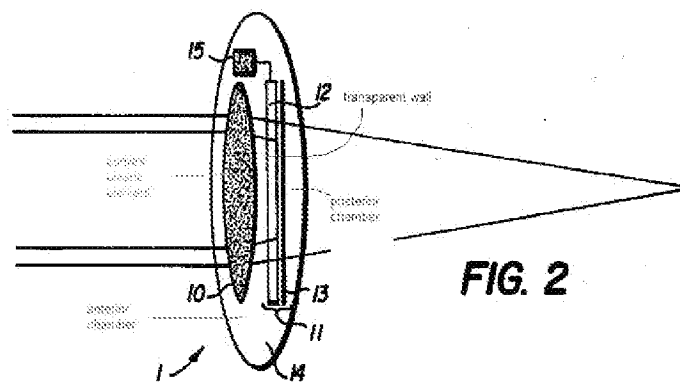
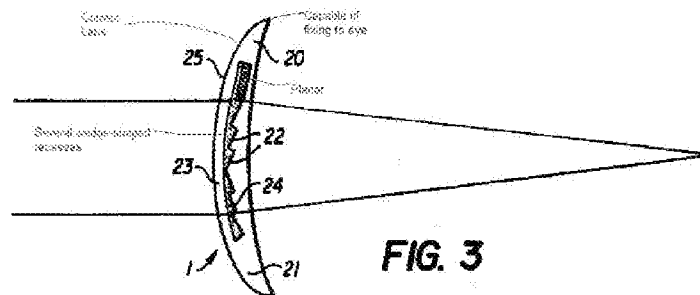


Figure 2 of Large

With respect to claims 13, 17, 20, 21; Stork discloses the invention substantially as claimed. However, Stork is silent with respect to: **claim 13)** a further optic means, such as a polarizer layer (13), that can be placed in the path of rays before or behind the lens device; **claim 17)** a lens where one side is planar and the other side has a superposition of wedge-shaped recesses and one or several Fresnel lenses capable of containing spherical or non-spherical segments depending on the lens

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chosen; **claim 20**) a lens placed with a polarizer layer; **and claim 21**) the use of electromagnetic or magnetic energy input. Large discloses: **claim 13**) a further optic means, such as a polarizer layer (13), that can be placed in the path of rays before or behind the lens device (See FIG. 2); **claim 17**) Large discloses a lens where one side is planar (See FIG. 3 below) and the other side has a superposition of wedge-shaped recesses and one or several Fresnel lenses capable of containing spherical or non-spherical segments depending on the lens chosen (c2:L55-59); **claim 20**) Large discloses a lens placed with a polarizer layer and thus an optic means where the optic is a lens (c2:L52-63); **and claim 21**) Large discloses use of electromagnetic or magnetic energy input. (See abstract and column 1, lines 53-63). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Stork's device with the teachings by Large, to have a polarizer layer, one planar and one wedge-shaped recesses and Fresnel lenses with spherical or non-spherical segments, in order to properly refract light coming into the eye of a particular patient.

*Figure 3 of Large*

Claims 9-10, 12, 18-19, and 22 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over “Stork and Large”, as applied to claims 1 and 6 above, and further in view of Skottun et al USPN 5,489,302 “Skottun”.

With respect to claims 9, 18; Stork and Large disclose the invention substantially as claimed. However, they fails to disclose a chamber connected to a supply and removal canal, a pump or volume modification means via valve(s) [with respect to claim 18: with a characteristic curve], so elements undergo a change of form when the pump or volume means is activated. Skottun discloses a chamber with a volume modification means [claim 18: with a characteristic curve (10)] thus changing the form when activated for the purpose of allowing a lower force to act on the membrane. (c8-9:L66-16). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of “Stork and Large” with a volume modification means to allow a lower force to act on the membrane. Skottun further discloses use of Boyle’s law to record performance or measurements (c9:L27-38). It is inherent that the pressure in the eye can be determined through Boyle’s law.

With respect to claim 10; Large discloses a surface (23) capable of being assigned to the wedge-shaped recesses (22) where an elastic element is at (or assigned) to each of these inclined surfaces and when a surface undergoes a rotation when the pump or volume modification means is activated, the focal point is designed to be redirected on the retina. This is inherent as the angle would have been modified when the volume modification means is activated.

With respect to claim 12; Large discloses implanting batteries capable of providing energy to the volume modification means (c5:L14-20,47-48).

With respect to claims 19 and 22; Large discloses a coating and/or material for the device to feature a refraction index equal to the chamber fluid. Large further discloses a transparent fluid (24) that is filled in the chamber (See FIG. 3) whose refraction index is also equal to that of the coating and/or material (c4:L4-8).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stork as applied to claim 1 above, and further in view of Faubl USPN 6,244,707.

With respect to claim 14; Stork discloses the invention substantially as claimed. However, Stork fails to disclose a lens with a UV-protective film for protection of the retina from UV rays. Faubl discloses a lens with a UV-protective film for protection of the retina (c1:L10-25) for the purpose of protecting the interior of the eye. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Large with a UV-protective layer in order to protect the interior of the eye.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. BOOTH whose telephone number is (571) 270-7027. The examiner can normally be reached on Monday thru Thursday 9:00am - 7:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Isabella can be reached on (571) 272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Examiner, Art Unit 3774

January 6, 2010

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